

“THE EFFECTS OF HIGH BLOOD PRESSURE IN PREGNANT WOMEN”

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CARDIO ESSAY #1

Blood pressure is the resistance the flow of blood encounters in a vessel particularly the arteries. When blood is pumped out of the heart via the aorta, the aorta has to exert the pressure of the arterial walls. This pressure is measured as diastole (when the heart is at rest), and systole (when the heart contracts). Blood pressure is represented as a fraction; diastole over systole. If the blood pressure either systole or diastole or both are above the normal, the condition is known as hypertension

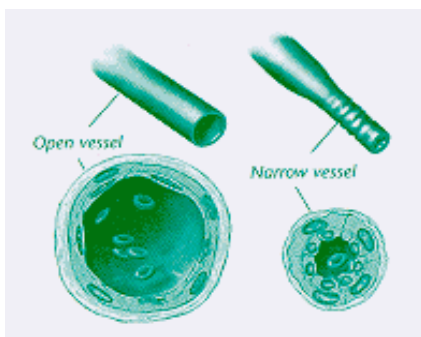
Blood Pressure Guidelines

Category	Systolic BP (mm Hg)	Diastolic BP (mm Hg)	Treatment recommendations
Normal	Less than 120	Less than 80	Lifestyle changes encouraged
Prehypertension	120–139	80–89	Lifestyle changes necessary Drugs for compelling indications*
Stage 1 hypertension	140–159	90–99	Lifestyle changes necessary Thiamine diuretic for most people May also consider other blood pressure drugs alone or in combination Drugs for compelling indications*
Stage 2 hypertension	160 or higher	100 or higher	Lifestyle changes necessary

In pregnant women, an elevated blood pressure or hypertension can lead to what is known as preeclampsia. The normal blood pressure in pregnant women is 180 systolic/80 diastolic. If the blood pressure values are above 180 for systolic or above 80 for diastolic, there is an indication of high blood pressure. For some pregnancies, the elevated blood pressure may return to normal with treatment that is safe for the fetus under a doctor's care. For other pregnancies hypertension may become chronic

throughout the pregnancy and possibly after. The elevated blood pressure along with the complications can cause serious problems associated with preeclampsia. Some of the symptoms of preeclampsia are; blood pressure above 140/90, persistent headaches, vision problems, pain in upper right abdomen, high uric acid or protein in urine, and edema in hands and face.

The fetus receives blood and nutrients from the mother via the placenta; the rise in the mother's blood pressure reduces the amount of blood flow by the narrowing of her blood vessels. The narrowing of blood vessels reduces blood flow to the fetus causing an inadequate supply of oxygen and nutrients, affecting the growth of the fetus. Separation



(When blood pressure is normal, blood vessels are open so that blood flows easily through. When the pressure is high, vessels are narrower making it more difficult for the blood to flow through.)

of the placenta could also occur. Preeclampsia also affects the mother by causing stress on the kidneys in the loss of protein and inability to rid the body of other wastes. If untreated preeclampsia could lead to serious complications for the mother including convulsions, stroke, pulmonary edema, kidney failure and liver damage.

Although the cause of preeclampsia is not yet known, certain risk factors could help doctors determine which pregnancies may have potential problems. Multiple fetuses, first pregnancies, obesity, history of hypertension, preeclampsia in previous pregnancies are some of the risk factors of developing preeclampsia. In severe cases bed rest or early delivery may be advised. In the case of early delivery, the development of the fetus will have to be considered. Cesarean or induced labor could be possible as well as medication to decrease blood pressure and blood clotting prior to delivery.

What is most important in every pregnancy is prenatal care. It is important to be under a doctor's care throughout the pregnancy. Blood pressure, weight and urine are

usually monitored in checkups so that any indication of preeclampsia or other possible complications can be dealt with early on in preparation for birth.

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